

ANTIALIASING METHOD AND APPARATUS FOR VIDEO APPLICATIONS

ABSTRACT OF THE DISCLOSURE

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Antialiasing method and apparatus for video applications. A method for antialiasing a video graphic. First, the processor renders the pixels and, during the step of rendering, determines if an edge pixel of a polygon is being rendered. If so, a sample point is defined within each pixel and a determination made if the sample point lies within the polygon or outside of the polygon. If the sample point lies within the polygon, the color of the edge pixel is set to the color of the polygon. If the sample point lies outside of the polygon, the color of the edge pixel is set to the color of the background. The percentage of the pixel that lies in the space associated with the sampling point is then calculated. The color of the pixel is stored in a frame buffer in association with the percent value that lies in the space associated with the sample point and in association with an indication that the sample point lies within the polygon or outside of the polygon. In a video processing step, the pixel information associated with a pixel to be output is fetched. For an edge pixel, determining if the color associated with the pixel is associated with the background or with the color of the polygon from the color indication associated with the pixel. If the pixel color is that of the polygon, the color of the pixel is blended with the color of a neighboring pixel outside of the polygon in a percentage defined by the stored percentage such that the percentage of the stored color is equal to the stored percentage value and the percentage

blended from the neighboring pixel is that associated with the percent of the pixel having been determined to lie outside of the polygon. If the pixel is the color of the background, the color of the pixel is blended with the color of a neighboring pixel in the polygon in a percentage that equals the color of the pixels multiplied by the percentage
5 lying outside of the polygon and the color of the polygon multiplied by the neighboring pixel or polygon multiplied by the percentage of the pixel lying within the polygon.

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